

## COMPOSITION FOR ENHANCING CONDUCTIVITY OF A CARRIER MEDIUM AND METHOD OF USE THEREOF

### Abstract of the Disclosure

5           A composition and method for enhancing the electrical and thermal conductivity. The composition comprises a powder having average particle sizes in the nanometer to micron size range, a coating for imparting corrosion resistance and/or acting as a dispersant, and a transfer medium. The transfer medium is selected from the group of interpolymers, polymers, gaseous and liquid fluids, and phase change materials. Suitable powders include metals and metal  
10   oxides, alloys or blends thereof, and carbon derivatives. The surface of the powder is modified by surface complexation or physical adsorption by a coating compound. The coated powder, when mixed with a transfer medium, forms a colloidal dispersion which exhibits enhanced heat transfer capacity, and electrical and thermal conductivity, stable chemical composition, faster heat transfer rates, and dispersion maintenance which are beneficial to most thermal or electrical  
15   transfer systems.